



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,712	02/09/2004	Connie C. Liu	SEA-2845.1	3832

36521 7590 01/09/2006

MOSER, PATTERSON & SHERIDAN LLP/
SEAGATE TECHNOLOGY LLC
595 SHREWSBURY AVENUE
SUITE 100
SHREWSBURY, NJ 07702

EXAMINER

RICKMAN, HOLLY C

ART UNIT	PAPER NUMBER
----------	--------------

1773

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/775,712

Applicant(s)

LIU ET AL.

Examiner

Holly Rickman

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 13 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) 1-5, 13 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The rejection of claim 17 under 35 U.S.C. 112, second paragraph, is withdrawn in view of Applicant's amendments.

Claim Objections

2. Claim 17 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 16 requires that the bottom surface of the composite nickel coating is in contact with the non-magnetic substrate. Thus, claim 17 does not further limit claim 16.

Claim Rejections - 35 USC § 103

3. The rejection of claims 16-17 under 35 U.S.C. 103(a) as being unpatentable over Ross et al. (US 5980997) is withdrawn in view of Applicant's amendments and arguments.
4. Claims 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US 5153044).

Chen et al. disclose a magnetic recording disk having a substrate with a first layer of NiP in contact with the substrate and a second layer of NiP thereon with a magnetic recording layer and protective layer thereon (see Fig 1). The reference fails to disclose a first Ni coating layer

Art Unit: 1773

that is “sputter deposited” and a second Ni coating layer that is “electrolessly deposited.” These limitations are process limitations in an article claim and are therefore, considered only insofar as they add distinguish the present claims in a structural or material manner over the prior art. It is the examiner’s contention that claimed deposition methods do not materially or structurally distinguish the present claims over Chen et al.

With respect to the claimed surface roughness(Ra) range, Chen et al. teach that it is preferred in their invention to provide a NiP surface that is uniform (i.e., smooth) in order to create a magnetic recording layer having a uniform crystalline structure (see col. 5, lines 53-57 and col. 6, lines 14-28). While the reference is silent with respect to the specific values of Ra that correspond to this above mentioned disclosure, it is the Examiner’s position that the reference is suggestive of a range of Ra that is as low as 0Δ . The reference teaches the preferred use of a smooth surface (i.e., this would ideally be 0Δ). Thus, it would have been a matter of routine experimentation for one of ordinary skill in the art to adjust the Ra of the NiP surface taught by Ross et al. to meet the disclosed surface requirements.

With respect to the limitations “non-polished” (see claim 16), the examiner takes the position that Chen et al. discloses a non-polished NiP layer because it teaches a method of forming the structure that does not include a polishing step in between deposition of the second NiP layer and the overlying magnetic layer. In any event, this limitation is a process limitation in an article claim. Because the product taught by the prior art appears to be the same as the claimed product, these limitations do not patentably distinguish the present claims over what is known in the art.

Even though product-by-process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Response to Arguments

5. Applicant's arguments filed 10/24/05 have been fully considered but they are moot in view of the new grounds of rejection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

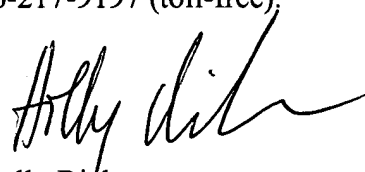
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1773

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Rickman whose telephone number is (571) 272-1514. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Holly Rickman', with a stylized flourish at the end.

Holly Rickman
Primary Examiner
Art Unit 1773